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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Request for Certification as a Cole manager  
WT Docket No. 98-228

Requested by:  
LaserGrade Computer Testing  
16209 SE McGillivray Ste. L  
Vancouver, WA 98683

Contact:  
Keith Woodard, VP, Business Development  
(v) 800-211-2753  
(f) 360-891-0958  
E-mail [kwoodard@lasergrade.com](mailto:kwoodard@lasergrade.com)

Keith Woodard's Original  
CODE

Dear Secretary:

LaserGrade Computer Testing is an international CBT (computer based testing) test network. We currently operate 300 + sites throughout North America and internationally. Our company has been in operation for 4 years conducting computer-based exams. Our clients include the FAA (Federal Aviation Administration), Nivo International (provider of the Microsoft Office User Specialist certifications), Professional Testing Inc. (provider of the Food Service Manager exam), AAFCS (American Association of Family and Consumer Sciences), and ISCET (International Society of Certified Electronic Technicians). We currently administer 40,000 exams per year.

We are an independent testing network providing computer-based testing to a variety of organizations; this requires us to operate in the strictest confidential manner to protect the security and integrity of our clients item bank and proprietary information. Being an independent testing network elements any potential conflicts of interest, as we have no interest in specific individuals taking the FCC exam, nor are we judged by passing percentages of candidates. Our only goal is to provide a pleasant testing experience for candidates coming to our centers to test, and protect the integrity of the test sponsors exam.

Our proposed fee structure is \$50 for the first module, then \$25 for each additional module taken during a single testing session.

Currently we administer the FCC exams through NARTE a FCC COLE manager. We offer all of the FCC written examination elements. NARTE has notified us of the filing window and has encouraged us to apply as a COLE manager. We offer the FCC exams

LaserGrade Computer Testing, Inc.

Box 87245, Vancouver, WA 98687-7245 • 800-211-2753 • Fax 360-891-0958 • [www.lasergrade.com](http://www.lasergrade.com)

at all of our locations throughout the US, and exams may be taken on a daily basis throughout the year. Candidates may register through the testing center, or by calling our 800 number call center.

It is our desire to work directly with the FCC to administer the FCC exams. Our association with NARTE has been created to offer the FCC exams while waiting for a filing window to open with the FCC to become a COLE manager. Working with NARTE has allowed us to develop the FCC exams and prepare ourselves for this opportunity. If approved as a COLE manager, NARTE will continue to refer candidates to our testing locations for certification, without the added burden of being a distribution manager for the FCC over seeing our operations and FCC accounting requirements. Many of our Aviation Flight Schools have a demand for your exam through related enterprises.

Thank you for the opportunity to be considered as a COLE manager. We are very excited to work directly with the FCC.

Sincerely,  
*LaserGrade Computer Testing*

A handwritten signature in black ink that reads "Keith Woodard". The signature is fluid and cursive, with the first letters of each word being capitalized and prominent.

Keith Woodard  
*VP, Business Development*



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E-mail [Kwoodard@lasergrade.com](mailto:Kwoodard@lasergrade.com)

# **Introducing LaserGrade Computer Testing**

## **LaserGrade Site List**

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## Introducing...

# LaserGrade Computer Testing Network

LaserGrade Computer Testing is pleased to introduce our nationwide computerized testing network.

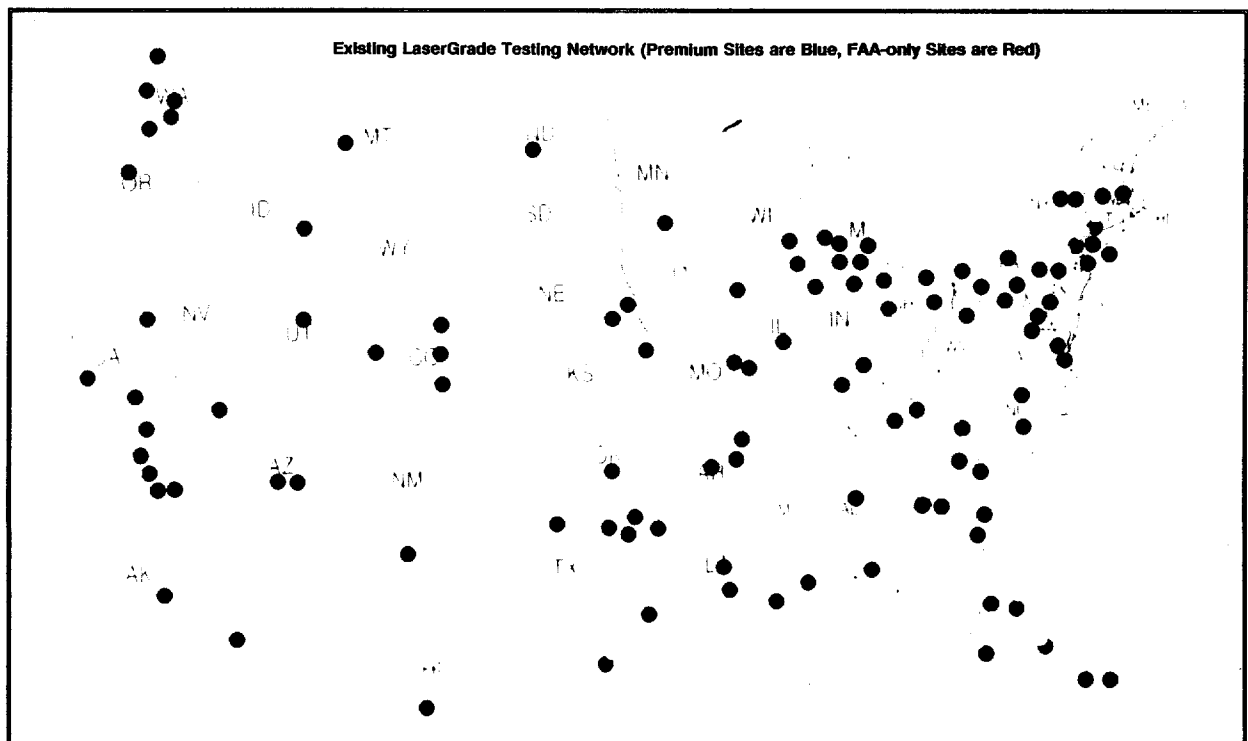
Since 1995, LaserGrade has built a reputation of providing unsurpassed levels of reliability, test security and customer service to our testing agencies, our test sites and our test applicants.

We have become the testing system of choice among FAA (Federal Aviation Administration) testing vendors.

Our track record with FAA testing has resulted in steady growth to more than 200 test sites nationwide, along with a growing number of international sites.

**All of our test sites meet FAA requirements, and meet or surpass any other testing alternatives.**

Test facilities are centrally located for the business community, with carpeted, comfortable, quiet surroundings, and leading edge technology (Pentium computers with SVGA color monitors).



**LaserGrade Testing Network**

## **Now you have a better choice**

You can choose LaserGrade to provide your computerized tests at our nationwide testing facilities.

We can be your primary source of test administration, or supplement testing facilities you currently use.

If you have existing computerized tests, we can incorporate them into our test engine, or utilize yours, if you prefer.

If you currently administer paper-and-pencil tests, we can easily convert them to the LaserGrade system, complete with on-screen graphics capability.

You may control the registration of your test applicants, if desired, by Internet access to our reservations database; or your test applicants may call our national reservations hotline. If desired, you may also allow on-site registration by test applicants.

After each test, we provide you with historical data on each applicant, and statistical data for each question and test type.

Using LaserGrade as your test administration company will simplify your entire testing process.

Now you have a better choice.

## **Test Security at LaserGrade**

LaserGrade's primary concern is the integrity of your testing data.

All test questions and associated data reside on our central computer. All data is password-protected on several levels.

Sensitive data is encrypted with an encryption routine conceived and written by LaserGrade.

LaserGrade modem servers will only accept calls from authorized LaserGrade test site computers.

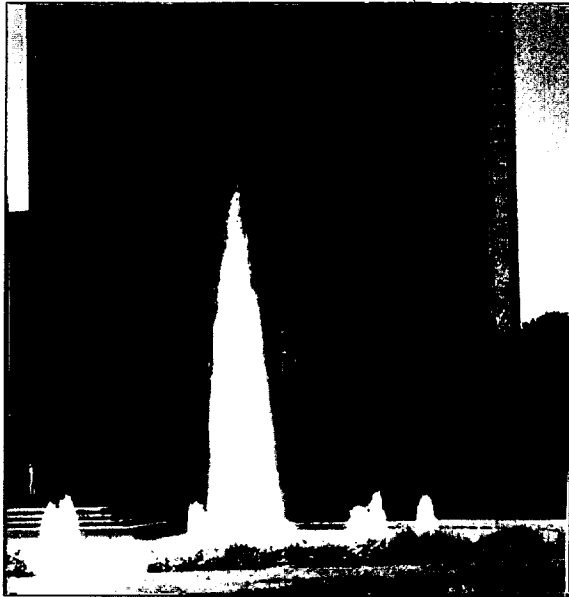
When downloading a test, the test site sends an encrypted, preformatted, and compressed packet of data to our central computer. Also, the applicant test data and questions are encrypted, compressed, and password protected before being sent back to the test site.

Only when the sensitive data is read into the active RAM of the test station is it decrypted, and then only one question at a time.

After each test, applicable files are over-written then erased, ensuring that no sensitive data stays on-site.

## **The Testing Facility**

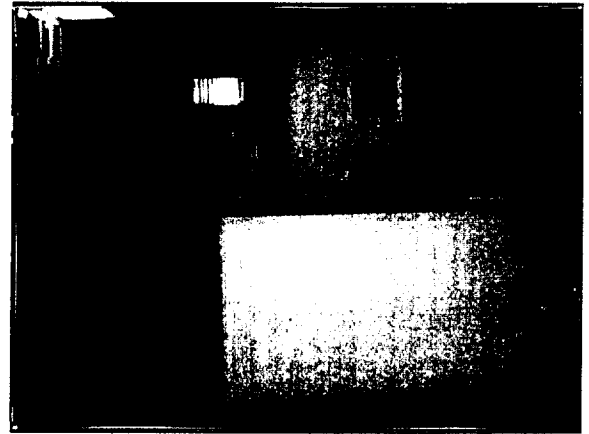
LaserGrade test sites are selected to meet the highest standards of professionalism, in quiet, comfortable surroundings.



Computer Concepts, Charlotte, NC

The LaserGrade testing experience starts with easy access to the test site. LaserGrade test sites are conveniently located for the business community, with easy on-site parking and convenient access to public transportation. Sites are also wheelchair accessible.

Easy access continues with test site schedules designed to accommodate individual needs. Each test site is open at least 30 hours each week, during normal business hours, PLUS one evening session each week, PLUS a weekend testing session.



The Fourth R of Orange County, Los Alamitos, CA

## **LaserGrade Personnel**

It's the staff at LaserGrade that makes the difference. Our dedication to customer service is unsurpassed in the industry.

LaserGrade begins with complete on-site training and inspection before a site can begin testing.

At each LaserGrade site, the TCS (Test Center Supervisor) is responsible for the daily operation of the test center.

Each test proctor is trained and passes a certification test before being allowed to administer tests.

Each group of people involved at LaserGrade realizes that our high-quality product, our superb track record, and our continuing success is dependent on each person providing the highest level of customer service.

This high quality of customer service is evident at every level of our customer contact. It starts when the test applicant first calls our nationwide reservations hotline. It continues with the test being ready when the applicant arrives at the test site, and finally by receiving immediate test results.

### **The Testing Room**

Each testing room has a minimum of three test stations, with a comfortable work area, separated by dividers. Each test applicant may store personal items in a lockable container.



Fly One, Springdale, AR

The testing area is visible from outside by a windowed viewing area from the proctor station.

In addition to the monitoring by the proctor, the testing session is equipped with video surveillance to ensure the highest level of security.

Registration and grading are done outside of the testing room to avoid any distractions to test takers.

### **The Testing Station**

LaserGrade test stations meet or exceed the highest standards of computerized testing stations.



Academy of Aeronautics, Boise, ID

LaserGrade sites provide on-screen graphics on easy-to-read 17" SVGA monitors, Pentium computers, and easy-to-use testing software. Every part of the system is designed for reliability and ease of use.

### **Conclusion**

Computerized testing is our expertise. It's the only thing we do.

Whether you use our test engine or yours, in computer based testing (CBT) or computer adaptive testing (CAT), LaserGrade is your best choice for computerized tests.

Call us today (1-800-211-2753) to see how easy it is to get started.

*LaserGrade Testing Network*



**LaserGrade**  
**Computer Testing**  
**Site List**

|  |   |
|--|---|
| <b>AK Anchorage</b><br>1740 E 5th Ave.                 | <b>San Diego - El Cajon</b><br>Next to Control Tower          |
| <b>Ketchikan</b><br>2600 7th Avenue                    | <b>Santa Monica</b><br>3021 Airport Ave. Ste. 115             |
| <b>Palmer</b><br>801-B Airport Rd                      | <b>Torrance</b><br>3201 Airport Drive                         |
| <b>AL Hoover</b><br>3825 Lorna Road                    | <b>Van Nuys</b><br>16431 Vanowen Street                       |
| <b>Huntsville</b><br>Redstone Arsenal                  | <b>Visalia</b><br>9505 W. Airport Dr.                         |
| <b>Jasper</b><br>20 Ellis Haynes Dr.                   | <b>Watsonville</b><br>150 Aviation Way, Suite #2              |
| <b>Ozark</b><br>144 Lakeview Road                      | <b>CO Broomfield</b><br>9769 W. 119th Dr., Suite #1           |
| <b>AR Jonesboro</b><br>3817 Lindberg Drive             | <b>Colorado Springs</b><br>1777 Aviation Way                  |
| <b>North Little Rock</b><br>8318 Remount Road          | <b>Grand Junction</b><br>2840 Blue Angel Lane                 |
| <b>Pocahontas</b><br>2006 Airways Lane                 | <b>Montrose</b><br>1450 Airport Rd                            |
| <b>Springdale</b><br>802 Airport Ave., 2nd Floor South | <b>CT Danbury</b><br>49 Miry Brook Rd                         |
| <b>AZ Chandler</b><br>2475 S Airport Blvd              | <b>FL Clearwater</b><br>1000 N Hercules Ave                   |
| <b>Glendale</b><br>6801 Glen Harbor, Suite 100         | <b>Daytona Beach</b><br>1585 Aviation Center Parkway, Ste 900 |
| <b>Prescott</b><br>Terminal Building                   | <b>Ft. Lauderdale</b><br>1995 W. Commercial Blvd Ste G        |
| <b>Scottsdale</b><br>14605 N. Airport Dr., Ste 100     | <b>Hollywood</b><br>7501 Pembroke Road                        |
| <b>Somerton</b><br>3900 Hwy 95                         | <b>Kissimmee</b><br>3010 W. Patrick St.                       |
| <b>Tucson</b><br>6961 S. Apron Dr.                     | <b>Lantana - WPB</b><br>2633 Lantana Rd, 18                   |
| <b>CA Carlsbad</b><br>2016 Palomar Airport Rd Suite K  | <b>Merritt Island</b><br>900 Airport Road                     |
| <b>Concord</b><br>145 John Glenn Dr.                   | <b>Naples</b><br>200 Aviation Dr.N                            |
| <b>Edwards AFB</b><br>Bldg 320 South Base              | <b>Orlando</b><br>397-B Herndon Ave.                          |
| <b>Eureka</b><br>4102 Jacobs Avenue                    | <b>Palm Beach Gardens</b><br>11600 Aviation Blvd, Suite B-4   |
| <b>Hayward</b><br>21587 Skywest Drive                  | <b>Pensacola</b><br>9750 Aileron Avenue                       |
| <b>Lancaster</b><br>4555 West Avenue G                 | <b>Punta Gorda</b><br>Bldg 117 Mooney Avenue                  |
| <b>Palo Alto</b><br>1886 Embarcadero Rd.               | <b>Tampa</b><br>9334 Vandenberg Airport Road                  |
| <b>Redding</b><br>2600 Gold Street                     | <b>Venice</b><br>150 Airport Avenue                           |
| <b>Sacramento</b><br>3801 Airport Road                 | <b>Vero Beach</b><br>1995 39th Ave., Suite C                  |
| <b>San Diego</b><br>3753 John J. Montgomery Dr.        | <b>Virginia Gardens</b><br>3814 Curtiss Parkway               |
| <b>San Diego</b><br>8665 Gibbs Dr., Suite 110          | <b>GA Athens</b><br>1070 Ben Epps Dr.                         |

|                                   |                                  |
|-----------------------------------|----------------------------------|
| <b>Brunswick</b>                  | <b>Danvers</b>                   |
| 601-B Connable Street             | West Side                        |
| <b>Chamblee - ATL</b>             | <b>Hyannis</b>                   |
| 1950 Airport Road                 | 110 Mary Dunn Way                |
| <b>Kennesaw - ATL</b>             | <b>Malden</b>                    |
| 1723 McCollum Pkwy                | 2 Florence Street, Suite 22      |
| <b>Riverdale</b>                  | <b>Worcester</b>                 |
| 6722 Hwy 85                       | Hangar One                       |
| <b>HI Honolulu</b>                | <b>MD Glen Burnie</b>            |
| 100 Kaulele Place                 | 1113 Dorsey Road                 |
| <b>IA Ankeny</b>                  | <b>Hagerstown</b>                |
| Todd's Field, 2699 NE 110th Ave   | 18625 Jarkey Drive               |
| <b>Denison</b>                    | <b>Owings Mills</b>              |
| Denison Aviation Offices          | Painters Mill Professional Cntr  |
| <b>Iowa City</b>                  | <b>MI Allegan</b>                |
| 1801 S. Riverside Drive           | 740 Grand Street                 |
| <b>Waterloo</b>                   | <b>Battle Creek</b>              |
| 1501 East Orange Road             | Blue Hangar North of Terminal    |
| <b>ID Blackfoot</b>               | <b>Detroit</b>                   |
| 1311 Airport Road                 | 10200 Erwin Ave.                 |
| <b>Mountain Home</b>              | <b>Flushing</b>                  |
| 2610 Airbase Rd                   | 3420 Ann Drive, PO BOX 265       |
| <b>IL Centralia</b>               | <b>Grand Haven</b>               |
| Terminal Building                 | 16446 Comstock St.               |
| <b>Frankfort</b>                  | <b>Grosse Ile</b>                |
| 22763 S. Center Rd.               | Hangar 2 - Suite 140             |
| <b>Sauget</b>                     | <b>Kimball</b>                   |
| #10 Omega Drive                   | 150 North Airport Drive, Suite B |
| <b>Schaumburg</b>                 | <b>Waterford</b>                 |
| 905 W. Irving Park Road           | 1525 Airport Road                |
| <b>Waukegan</b>                   | <b>Ypsilanti</b>                 |
| 3550 North McAree Road, Suite 104 | 832 Willow Run Airport           |
| <b>IN Fort Wayne</b>              | <b>MN Blaine</b>                 |
| 10501 Tenth Street Suite 200      | 8891 Airport Rd.                 |
| <b>Griffith</b>                   | <b>Cloquet</b>                   |
| 1705 E. Main Street               | 1660 Airport Rd                  |
| <b>Indianapolis</b>               | <b>Minneapolis</b>               |
| 7251 West McCarty Street          | 6000 Douglas Drive North         |
| <b>KS Garden City</b>             | <b>South St Paul</b>             |
| 508 College Drive                 | 1620 Henry Avenue                |
| <b>Wichita - Benton</b>           | <b>Winona</b>                    |
| Hwy 254 to Butler Rd-Airport Sign | 100 Galewski Drive               |
| <b>KY Louisville</b>              | <b>MO Chesterfield</b>           |
| Triangle Flying Service Building  | 18445 Edison Ave.                |
| <b>LA Alexandria</b>              | <b>Kansas City</b>               |
| 1616 Arnold Drive, Suite 6        | Terminal Bldg, Suite 266N        |
| <b>Hammond</b>                    | <b>Rolla</b>                     |
| 553 N. Industrial Park Road       | 17451 State Rt O                 |
| <b>New Orleans</b>                | <b>MS Cleveland</b>              |
| 5701 Walter Beech St.             | Gibson-Gunn Building             |
| <b>Shreveport</b>                 | <b>Ocean Springs</b>             |
| 1550 Airport Dr., Bldg #19        | 8600 Blueberry Road              |
| <b>MA Bedford</b>                 | <b>MT Billings</b>               |
| 150 Hanscom Drive                 | 1511 Poly Drive                  |
| <b>Bridgewater</b>                | <b>NC Fayetteville</b>           |
| Maxwell Library Room 6            | 6039 Morganton Road              |

|   |   |
|---|---|
| <b>Greenville</b><br>1105 N.Memorial Dr.                      | <b>Xenia</b><br>140 North Valley Road                   |
| <b>Havelock</b><br>322 Hwy 70 West Westbrooke Shopping Center | <b>OK Altus</b><br>Rt 1 Box 44                          |
| <b>Hudson</b><br>2855 Hickory Blvd                            | <b>Chickasha</b><br>N.Airport Entrance RR1 Bx 209-5     |
| <b>Louisburg</b><br>440 Airport Road                          | <b>Sallisaw</b><br>HC 61 Box 28                         |
| <b>Mocksville</b><br>249 Gilbert Rd                           | <b>Tulsa</b><br>Downtown Tulsa                          |
| <b>Sanford</b><br>3000 Airport Rd.                            | <b>OR Gresham</b><br>202 SE 181st Suite 207             |
| <b>ND Minot</b><br>2216 North Broadway                        | <b>Sun River - Bend</b><br>Hangar D1                    |
| <b>NE Kearney</b><br>19th Ave & University                    | <b>PA Bellefonte</b><br>612 Buffalo Run Rd.             |
| <b>Lincoln</b><br>4301 North Park Road                        | <b>Coatesville</b><br>#1 Earhart Drive                  |
| <b>NH Nashua</b><br>79 Perimeter Road                         | <b>Montoursville</b><br>580 South Loyalsock Ave.        |
| <b>NJ Andover</b><br>Andover Flight Academy                   | <b>New Castle</b><br>Rd 2 Box 316                       |
| <b>Somerville</b><br>1034 Millstone River Road                | <b>New Cumberland</b><br>106 Airport Road               |
| <b>Teterboro</b><br>FAA Building, Hangar 17                   | <b>Philadelphia</b><br>North Philadelphia Jet Center    |
| <b>Wrightstown</b><br>3401 Broidy Ave                         | <b>Reading</b><br>R.D. #9, Box 9018                     |
| <b>NM Albuquerque</b><br>3400 Clark Ave.                      | <b>Reynoldsville</b><br>RD #2 Box 90B                   |
| <b>NV Las Vegas</b><br>135 E. Reno Ave #F6                    | <b>PR San Juan</b><br>North Side of Airport             |
| <b>NY Farmingdale</b><br>Route 109                            | <b>SC Columbia</b><br>Terminal Building                 |
| <b>New York</b><br>500 8th Avenue, Suite 1210                 | <b>Rock Hill</b><br>400 Airport Rd.                     |
| <b>Rochester</b><br>Greater Rochester Intl Airport            | <b>Simpsonville</b><br>202 N. Maple, Suite #111         |
| <b>Ronkonkoma</b><br>101 Hering Dr.                           | <b>SD Huron</b><br>Building 5                           |
| <b>Saranac Lake</b><br>Rte 1 Box 209-A,Olympic Finishers      | <b>TN Memphis</b><br>2787 N. Second St.                 |
| <b>Scotia</b><br>19 Airport Rd.                               | <b>Nashville</b><br>210 Tune Airport Dr.                |
| <b>Westhampton Beach</b><br>Building No. 1                    | <b>TX Arlington</b><br>300 W. Arbrook Blvd              |
| <b>OH Bowling Green</b><br>1255 East Poe Road                 | <b>Big Spring</b><br>2000 Airport Dr. West, Bldg 1106   |
| <b>Chesterland</b><br>8389 Mayfield Road                      | <b>Corpus Christi</b><br>305 Pinson Drive               |
| <b>Cincinnati</b><br>Located in A-Frame Building              | <b>DFW Airport</b><br>400 Fuller-Wiser Road - Suite 110 |
| <b>Defiance</b><br>07557 St. Rte 15                           | <b>Dallas</b><br>4511 Eddie Rickenbacker                |
| <b>Middletown</b><br>1707 Run Way                             | <b>Danbury</b><br>1111 Old Ranch Rd.                    |

**El Paso**  
6775 Convair Rd, Suite F  
**Houston - Hobby**  
9000 Randolph  
**Killeen**  
1315 Airport Drive  
**Levelland**  
Route 1 Box 50  
**Lubbock**  
Rt 3 Box 49  
**San Antonio**  
9623 W. Terminal Drive  
**San Marcos**  
1815 Airport Drive  
**Spring**  
19931 Stuebner Airline Rd.  
**Wichita Falls**  
4515 Jacksboro Hwy  
**UT Salt Lake City**  
Executive Terminal Bldg  
**VA Hampton**  
Department of Aviation  
**Manassas**  
10600 Observation Road  
**Vienna**  
8298A Old Courthouse Road  
**Virginia Beach**  
1429 Miller Store Road  
**VI St Thomas**  
North Side  
**WA Bellingham**  
333 Telegraph Rd  
**Gig Harbor**  
1620 - 26th Ave NW  
**Kent**  
29300 179th PL SE  
**Port Townsend**  
195 Airport Road  
**Seattle**  
6505 Perimeter Road  
**Seattle**  
19011 16th Avenue South  
**Seattle**  
8555 Perimeter Road South  
**Spokane**  
6423 E. Rutter Ave.  
**Vancouver**  
101 E. Reserve St  
**Wenatchee**  
200-F Airport Way  
**WI Milwaukee**  
4800 S. Howell Ave.  
**WV Fairmont**  
914 Morgantown Avenue

#### **INTERNATIONAL SITES**

**ENGLAND Gloucestershire**  
SE 15 Gloucestershire Airport  
**FRANCE Paris**  
25 Rue Rousselle, Putaux



## **LaserGrade Site Requirements and Computer Specifications**

| <b>Item</b>                            | <b>Premium Sites</b>   | <b>FAA-Only Sites</b>   |
|--|--|---|
| <b>Physical Location:</b>              | Conveniently located for the business community.   | Conveniently located for the aviation community.                                |
| <b>Testing facility:</b>               | Building must have professional appearance.  | Suitable for aviation purposes.   |
| <b>Parking facilities:</b>             | On-site parking in paved, striped parking lot.   | On-site parking.  |
| <b>Handicap access:</b>                | Wheelchair accessibility.  | Optional.   |
| <b>Business lobby:</b>                 | Professional appearance.   | Suitable for aviation facility.   |
| <b>Testing Room:</b>                   | Separate, quiet, carpeted testing room, with lighting and temperature control.                         | Same.   |
| <b>Proctor station:</b>                | Windowed viewing area outside testing room.  | Same.   |
| <b>Lockable storage areas:</b>         | Lockable file cabinet for securing test materials, plus lockable storage for applicant personal items. | Same. Lockable storage for applicant personal items is optional.                |
| <b>Testing Stations:</b>               | Minimum three testing stations, plus proctor station computer.   | Minimum three testing stations. Proctor station computer not required.          |
| <b>Separation of testing stations:</b> | Individual testing carrels. Each work space at least 36" wide and 30" deep.                            | Individual testing carrels or testing stations at least five feet apart.        |
| <b>Surveillance</b>                    | Proctor viewing window, plus video surveillance. Proctor station has color cam for applicant photo.    | Proctor viewing window. Video surveillance is optional. Color cam not required. |

## LaserGrade Computer Specifications

| Item                        | Premium Sites  | FAA-Only Sites  |
|-----------------------------|--|---|
| <b>Computers:</b>           | IBM-compatible Pentiums. At least 100 MHz, with 16 Mb (megabytes) RAM.   | IBM-compatible 486SX-33 with 1 Mb RAM. We currently ship 166MHz Pentiums with 8 Mb RAM.   |
| <b>Operating System:</b>    | Windows 95.  | DOS 6.22. Windows 3.1 or Windows 95 optional.   |
| <b>Network:</b>             | Required.  | Optional.   |
| <b>CD-ROM Drive:</b>        | Installed on proctor station.  | Optional.   |
| <b>Communication Ports:</b> | Mouse on COM1, Modem on COM2, printer LPT1.  | Same.   |
| <b>Modem:</b>               | Minimum 14,400 baud, with V.42/V.42bis. If 28,800 or higher modem, V.34Plus. Proctor station has 56K baud modem for Internet access. | Same. We currently ship 33.6K baud, with V.34Plus and V.42bis. Internet access optional.  |
| <b>Printer:</b>             | 100% compatible with Hewlett Packard series of ink jet or laser printers.  | Same. We currently ship HP 400 ink jet printers.  |
| <b>Printer Connection:</b>  | Via network at proctor station.  | 4:1 parallel connection box.  |
| <b>Monitor:</b>             | 17" SVGA .28 pitch, displaying 256 colors on a 1280x1024 screen.   | 14" SVGA .28 pitch, displaying 256 colors on a 1024x768 screen.                           |
| <b>Graphics Card:</b>       | Compatible with Trident 9440 with 2 MB RAM, displaying 256 colors in 1280x1024 to 640x480.   | Compatible with Trident 9440 with 1 MB RAM, displaying 256 colors in 1024x768 to 640x480. |
| <b>Fixed (Hard) Drive:</b>  | Proctor station 500 megabytes available space. Others 100 Mb.  | Minimum 200 megabytes available space. We currently ship 1.2 Gb.                          |

## **LaserGrade SITE REQUIREMENTS - GENERAL EVALUATION ITEMS**

### **1. Conformance with local building, sanitation, and health codes.**

- A. Building and grounds must be clean and in good condition.
- B. Restrooms must be clean, supplied with towels etc., and in working order.
- C. The exits must be clearly marked and unobstructed.
- D. Fire extinguishers, when required, must be in working order, location well marked and easily accessible.
- E. Adequate parking must be available, near the site location.
- F. In general, the site should exhibit a pleasant and comfortable atmosphere conducive to a good testing environment.

### **SEPARATE TESTING ROOM (Must be a separate room with closeable door and see-through window)**

### **2. Proper control of temperature and ventilation.**

- A. The testing room must be comfortable and well ventilated.  
A temperature range between 70 and 75 degrees F. is suitable.
- B. Ventilation should supply a continuous circulation of air.

### **3. Adequate lighting.**

- A. Testing room must be lighted so that the applicant at each terminal can easily read all diagrams, charts etc., and read the computer screen without difficulty.

### **4. Adequate physical space.**

- A. Testing room must be large enough to comfortably place three computer tables, chairs, and printer stand. Generally speaking, 120 square feet or larger is adequate.
- B. Each testing terminal must be separated with suitable partition.

**5. Adequate table work space.**

- A. There must be enough space for the computer monitor, keyboard, mouse pad and testing materials the applicant will be issued. A recommended table size is 42" X 30".

**6. Freedom from noise and distractions.**

- A. Testing area should be located so applicants will not be disturbed by foot traffic, loud conversation, or outside noise.
- B. Test rooms shall be free from any other activity during testing sessions; during non-testing times, the testing room is available for other uses.

**7. A minimum of 3 operational computer terminals at each testing center.**

- A. Test sites must have 3 operational terminals to be considered an active site.

**8. Ease of applicant surveillance.**

- A. All three test terminals **must** be visible at all times during a testing session, via a window in the testing room to comply with this requirement.

**9. Adequate provisions for security.**

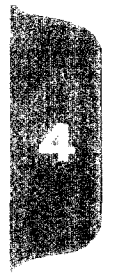
- A. Testing room door must be lockable. Access to this room must be strictly monitored. Only authorized personnel are permitted.
- B. All testing materials must be secured when not in use. Usually a locking file cabinet is used for this purpose.
- C. All applicant information is confidential.
- D. The Testing Center Supervisor is responsible for security.

**10. Adequate provisions for safety and emergencies.**

- A. Emergency exits must be clearly identified, and clear of obstructions.
- B. Emergency first aid kits, if required, must be stocked and easily accessible.
- C. If fire extinguishers are required, they must be operational.

**REQUIRED EQUIPMENT AND SUPPLIES**

- 1. Copy machine to provide copies of applicant ID's and test eligibility for testing center files.
- 2. A locking four drawer file cabinet to secure test materials and to store applicant files.
- 3. A printer stand for the test center printer.
- 4. Clipboards for keeping applicant papers together before filing.
- 5. Three ring binders, to organize testing material.
- 6. A spare printer cartridge.
- 7. A ream of scratch paper for the applicants. (Two sheets to each applicant)
- 8. Supply of #2 pencils. (Two are issued to each applicant)
- 9. Test report embosser. (Supplied by LaserGrade)
- 10. Site procedures manual. (Supplied by LaserGrade)



## **What LaserGrade can do for you**

LaserGrade Computer Testing has a proven track record of excellence, and is ready to be part of your computerized testing application.

### **LaserGrade can help you finalize your test bank.**

If you decide to seek outside expertise on the writing of your test bank or any of the aspects of your licensure and certification process, we can recommend several organizations that specialize in test and measurement services.

### **LaserGrade can advertise your tests.**

With each type of testing we will establish an advertising program (similar to the advertising of our FAA testing) to ensure your test applicants are aware of testing availability.

### **LaserGrade can register your test applicants.**

Our nationwide toll-free telephone registration hotline can pre-register your test applicants at the date and location most convenient to them. As the testing agency, you also have the ability to register applicants in the LaserGrade testing system, utilizing Internet-based access to our registration system.

### **LaserGrade can administer your tests.**

Your organization may provide us with your test bank in a word-processing document that we can incorporate into the LaserGrade testing format. Alternatively, you may provide us with a complete testing executable for use at the test site. Either way, we will ensure that when your test applicant arrives at the test site, the test will be waiting.

**LaserGrade can provide complete historical data after each test.**

For each applicant, we send complete information regarding each answer selection. This allows you to do the statistical analysis on the test as a whole and on each individual test question. LaserGrade also provides statistical analysis for you, if requested.

**LaserGrade can start now.**

With our existing network of more than 200 test sites, and additional sites coming on-line each week, we are ready to be part of your computerized testing application.

Call us at 800-211-2753 to get started.



## **LaserGrade: Top-of-the-class**

### **LaserGrade is Reliable**

LaserGrade Computer Testing insists on reliability in its computer testing network. Test sites may download tests 24 hours per day, 365 days per year.

There is no excuse for lengthy, costly outages. This has been our policy from day one.

**Electrical power interruptions** to our central server are handled with battery backups that allow for a three hour interruption of power to our central offices. When a power outage occurs, our central computer automatically calls our 24 hour emergency number. If power is not restored within three hours, we power our system using a gas-powered electrical generator.

**Telephone interruptions** occur for three reasons, and each is covered: If our long distance telephone provider has a national outage (It happens!), our test stations have the ability to dial our local area code and telephone number, instead of the 800 number they usually call. If one of our central modems fail or is busy, incoming calls are automatically routed to the next modem line in sequence. If a break occurs in the telephone lines coming into our building, we can utilize cellular service until the line is repaired. If a site is experiencing problems calling with their modem, they can adjust the speed of the modem to a slower speed. Even at a slower speed, most calls take less than two minutes.

LaserGrade uses T1 telephone service, which provides the highest quality, most reliable digital service between our central server and each test site.

**Individual test station malfunctions** - A LaserGrade testing suite consists of three testing stations. Whether our testing suite is networked or uses stand-alone computers, the test center can remain functional if a computer becomes inoperative. If a test station should go down, we can access that computer from our central office and diagnose the problem. If needed, our technical support department can ship another station to the site within 24 hours so all three stations are functional.

During a LaserGrade test, the test station saves the applicant data every two minutes. If a power interruption should occur at a local site, less than two minutes of information is lost. When the proctor restarts the computer, the applicant may continue where he/she was at the time of the power failure.

We take pride in the fact that in our first year and half of operation, we have yet to lose any applicant's test data.

### **LaserGrade is Secure**

LaserGrade is concerned with the integrity of your testing data. We have taken several measures to insure that your data is protected.

The ONLY place that a test question may be viewed, read or modified is from the LaserGrade Central server. We import your test bank into our central server and your questions reside there. It is password protected on several levels.

The LaserGrade modem servers will NOT accept calls from a non-LaserGrade station. Additionally, the only way a LaserGrade test station may access our modem servers is by sending a pre-formatted packet of data to the modem server. This packet of data is password protected, and the modem server will reject any calls that do not deliver the correct password to gain access to the system.

The applicant data and test questions are downloaded to the local test site and are encrypted, compressed then password protected. All sensitive data is encrypted with a custom encryption routine that was conceived and written by LaserGrade. It is only when the sensitive data is read into active RAM that it is decrypted, and then only one question at a time. The correct answer to the test question only resides in the encrypted data. Any data that is of a secure nature and needs to reside on the local testing station is encrypted in this manner.

A LaserGrade computer testing station may only be accessed by an authorized proctor who has been trained and tested. Each proctor has a unique 9 digit password. It is their only method of entry into a LaserGrade testing station. If a person enters an invalid password three times, the test station will lock-up and refuse any access. The only way that this station can be unlocked is for the proctor to call our central office and obtain a key sequence and a one-time password to unlock that station. The identification of the proctor that administers each test is merged into the applicant's test data. Also, LaserGrade will allow test sites to have other training material and/or a floppy drive on their testing stations ONLY if all material associated with LaserGrade testing is hidden from view by a menu system that also does not allow access to the DOS level of the computer. In this way the test station may be used for training purposes OR testing purposes, but may only be used for testing purposes if it is rebooted and accessed with a valid proctor password.

### **LaserGrade has a "can-do" attitude**

LaserGrade realizes it is important to provide the best level of customer service to our sponsoring agencies, our test sites and our test applicants. Also with rapidly changing technology there must be a high level of commitment towards flexibility. LaserGrade provides both!

### **Flexibility in test applicant registration**

Test applicants may call our nationwide 800 registration number to prepay for, and schedule a test. They may also show up for walk-in registration at the test site. Pre-scheduled exams are automatically downloaded to the site.

### **Flexibility in test payment methods**

Test applicants may register and pay (by check or credit card) for a pre-registered scheduled or non-scheduled exam through our nationwide registration number. If they prefer, they may walk-in and pay by cash or check at any of our site locations.

### **Flexibility in test site scheduling**

LaserGrade test sites are in complete control of their testing schedule. They can test on demand, without having to wait for the central office to build and send a test for an applicant. Tests may be downloaded 24 hours a day, 7 days a week.

### **Flexibility in test site size**

LaserGrade requires a minimum of three testing stations at each test site, allowing the site the ability to test approximately 300 people per month. Our software is designed to operate in the smaller, network-free environment, and also in the larger environment of a college computer lab.

### **Flexibility in computer requirements**

There are no magic requirements to run the LaserGrade system. Our stand-alone systems are Pentium machines with 8 megabytes of RAM, with at least 250 megabytes hard drive space for graphics files. Our Windows 95-based networked systems allow the use of test engines provided by outside testing agencies. Computer labs store graphics files on the server, allowing workstations to administer the test software.

*LaserGrade Testing Network*

### **Flexibility in test changes**

Incorporation of test changes is easy to accomplish. LaserGrade is able to incorporate minor changes on a same-day basis, and major changes, including graphics, with a few days notice. Sponsoring agencies also have the ability to review this data online from our central server to verify these changes.

### **Flexibility in utilizing emerging technology (Internet)**

LaserGrade is committed to innovations in computerized testing. The Internet, of course, is an evolving communications medium. Initial development of computerized testing via the Internet started in 1997. Browser and encryption technologies being developed will have relevant applications for the Internet testing environment.

We are laying the ground work for Internet-based testing. There are many security issues to address, but the enormous potential of being able to test at high school, college and university computer labs with direct connections to the Internet is exciting. This is an emerging prime market for computer based testing.

In general, our plan for Internet testing will have each applicant pre-registered for a specific site and day. The test package for each applicant will be pre-built by our central computer, utilizing criteria specified by the testing agency.

At the pre-specified time and date, the applicant's test package, including the questions, figures and executable program that presents the test will be compressed, encrypted then downloaded via the Internet to the computer lab at the specific site.

The test proctor will then log off the Internet, use his/her password to assign each applicant to a specific computer in the test lab, do the required identification checks, then expand the test to one of the computers in the lab.

During the actual test, the applicant will utilize a self-contained test executable file on the work-station, and NOT be able to access any other part of the computer lab software or Internet.

At the end of the test, the proctor will utilize a program to compress and encrypt the applicant's test results then send them back to LaserGrade's central server. As with all agencies, LaserGrade will then forward this data back to the testing agency.

Of course, the advantage of Internet based testing is that it provides access to areas where many people can be tested at one time. A typical college computer lab with thirty test stations could provide sixty to ninety tests in one day.

## **Conclusion**

Professional organizations that utilize computer-based licensure and credentialing exams expect and deserve to work with a test administration company that is reliable, secure, and able to handle the nuances of each testing situation.

LaserGrade has "raised the standard" in computerized testing by providing a premium testing environment with unsurpassed customer service to our testing agencies, test sites and test applicants. Our on-screen graphics, on-demand testing, automatic updating of all test-site-based computer data, and simple, reliable computer testing equipment, have helped us achieve a standard unsurpassed by other testing companies.



## **How the LaserGrade System Works**

This section gives an overview of how the different test data banks are received from the sponsoring agency. It also details: 1) how we build the information into specific tests, 2) how each test applicant receives and takes his/her test, 3) how the applicant data is returned to us, 4) how we compute statistical data for each question, each test, and each applicant, and 5) how we send that applicant data to the sponsoring agency.

Following is an example using the FAA Private Pilot test bank as an example. The complete list of FAA tests include twelve test banks, including over 10,000 questions.

### **Data is received from sponsoring agency**

The FAA Private Pilot test bank has about 1000 questions, and is the test bank for 13 different tests (Private Pilot Airplane, Private Pilot Glider, Private Pilot Rotorcraft Helicopter, Recreational Pilot Gyroplane etc). This test bank is delivered to us by modem in a Microsoft Word document.

Each test name has a three letter code (PAR, PGL etc). Additionally, the FAA sends us (usually six) test selection lists for each of the 13 tests, numbered in a sequence (301 to 306). There are 75 total test selection lists for the Private Pilot tests (780 test selection lists in total for all FAA tests), containing 30 to 60 questions each. Each test selection list is a document containing the four digit question numbers in the sequence to be administered.

Each question in the test bank has its own four digit question number, the text of the question and answers, the correct answer and a six digit Subject Matter Code.

### **LaserGrade builds this data into specific tests**

A file is created for each of the 75 tests (PAR301 etc), following the FAA test selection format.

We also have the ability to create test forms based on the requirements of any testing agency. The test can be divided into a maximum of nine major sections, with up to 40 defined, sub-section selection categories. Questions are selected at random, ensuring acceptable subject matter sequencing, acceptable "P" value for each major section, and "P" value and point biserial coefficient values for the overall test form.

When a test site requests a test for an applicant, we assign (at random) an appropriate test selection list and send this test and the edited applicant data file to the test site.

When revisions to tests are made by the sponsoring agency, we receive the list of changes, correct each question or test selection file that is affected, and rebuild the tests in our central computer so they are ready to be downloaded.

### **An applicant registers for a LaserGrade test**

Applicants may be registered for a test in one of four ways:

**One** - Testing agencies may pre-qualify their test applicants and register these applicants, using Internet-based access to our registration system.

**Two** - Applicants may call our national registration 800 number and pay for the test using a credit card. During this call we input the necessary registration data (name, social security number, age, exact type of test etc). The applicant may reserve a time at a specific test site or may leave the date and location as unassigned. All registrations are confirmed in writing.

When an applicant schedules for a specific date and location, the test site is automatically notified of the scheduled test (up to one week in advance) and the test is automatically downloaded on the appropriate day. When the applicant arrives, the applicant's test is ready to be taken.

Each test site is required to have their computer call us every day they are open, to receive an updated schedule of tests, download any tests scheduled for that day, receive any E-mail, and update any data files that have changed.

**Three** - If the applicant prefers to leave the date and location unassigned, he/she is given an eight digit locator number (confirmed in writing) and may take that locator number to any LaserGrade test site. The test proctor will input the person's name and locator into an available test station, then have that test station call our central computer and download the test. This procedure takes less than five minutes.

**Four** - The test applicant may arrive unscheduled at a testing site and pay the test site for a test. The proctor will input the registration data into an available test station, have that test station call our central computer to send us the registration data and download the test, then the applicant is ready to begin his/her test. This modem call takes about two minutes.

### **The test site sends the applicant data to our central computer**

When the test site makes the required daily computer call, any graded tests residing at the site are sent to us.

The applicant data file is stored on our central computer for immediate access by the sponsoring agency. The applicant's complete record is available, including 1) questions presented, 2) the applicant's response, 3) all registration items, 4) time spent on each item and the test as a whole, 5) score information, both by section and total, and 6) applicant critique.

Enrollment information is immediately available for individual test types, selected test locations or geographic areas, on specified test dates.

Each week we send the required data for each completed test to the sponsoring agency.

### **We keep statistical data for each test and each question**

LaserGrade maintains a statistical evaluation of each test by monitoring 1) score distribution, 2) average score for each test and each test section, 3) standard deviation, 4) pass/fail ratio, 5) reliability, 6) measurement error, 7) skewness and 8) kurtosis.

For each test question, we also monitor 1) the number of responses, 2) the number of applicants selecting each, 3) the "P" value, and 4) point biserial coefficient.

The testing agency has access to this data by special access to our central computer.

### **How data on each test station is kept up-to-date**

Each time a test station calls our central computer, it sends the names and dates of all files on that test station (data files and graphic files, about 1100 total). Any files that have been updated are automatically downloaded to the test station.

### **Conclusion**

LaserGrade's system is streamlined and focused to run smoothly at every step of the process. It is designed with expansion in mind. What works well for FAA testing will work as well in other testing areas. Offering an excellent product is the cornerstone of LaserGrade's success.



